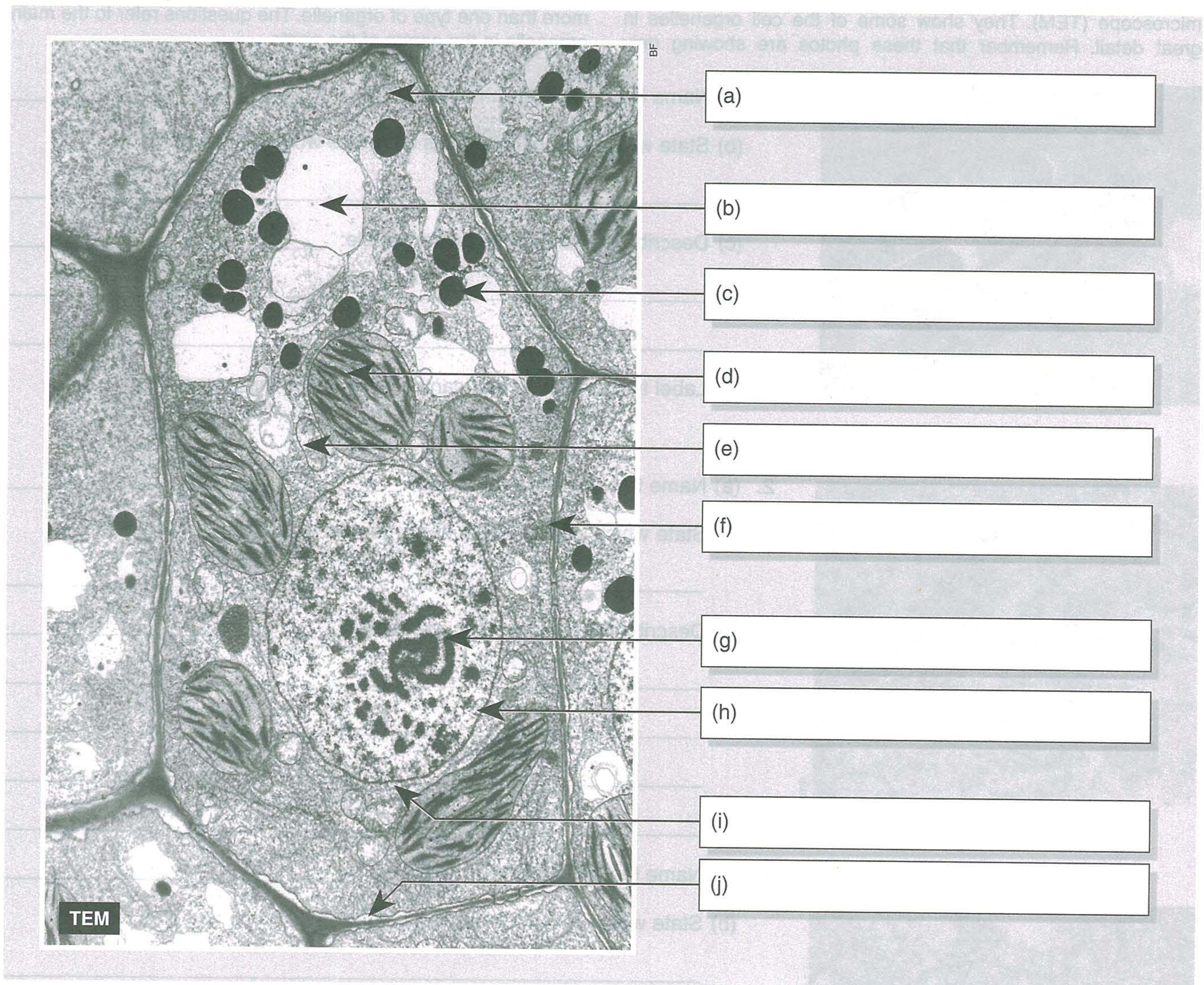


# Identifying Cell Structures



1. Study the diagrams on the previous pages to become familiar with the various structures found in plant and animal cells. Identify and label the ten structures in the cell above using the following list of terms: *nuclear membrane, cytoplasm, endoplasmic reticulum, mitochondrion, starch granules, chromosome, vacuole, plasma membrane, cell wall, chloroplast*
2. State how many cells, or parts of cells, are visible in the electron micrograph above: \_\_\_\_\_
3. Identify the **type** of cell illustrated above (bacterial cell, plant cell, or animal cell). Explain your answer:  
\_\_\_\_\_  
\_\_\_\_\_

4. (a) Explain where cytoplasm is found in the cell: \_\_\_\_\_  
\_\_\_\_\_

- (b) Describe what cytoplasm is made up of: \_\_\_\_\_  
\_\_\_\_\_

5. Describe two structures, pictured in the cell above, that are associated with storage:

- (a) \_\_\_\_\_  
\_\_\_\_\_

- (b) \_\_\_\_\_  
\_\_\_\_\_





# Identifying TEM Photographs

The photographs below were taken using a transmission electron microscope (TEM). They show some of the cell organelles in great detail. Remember that these photos are showing only

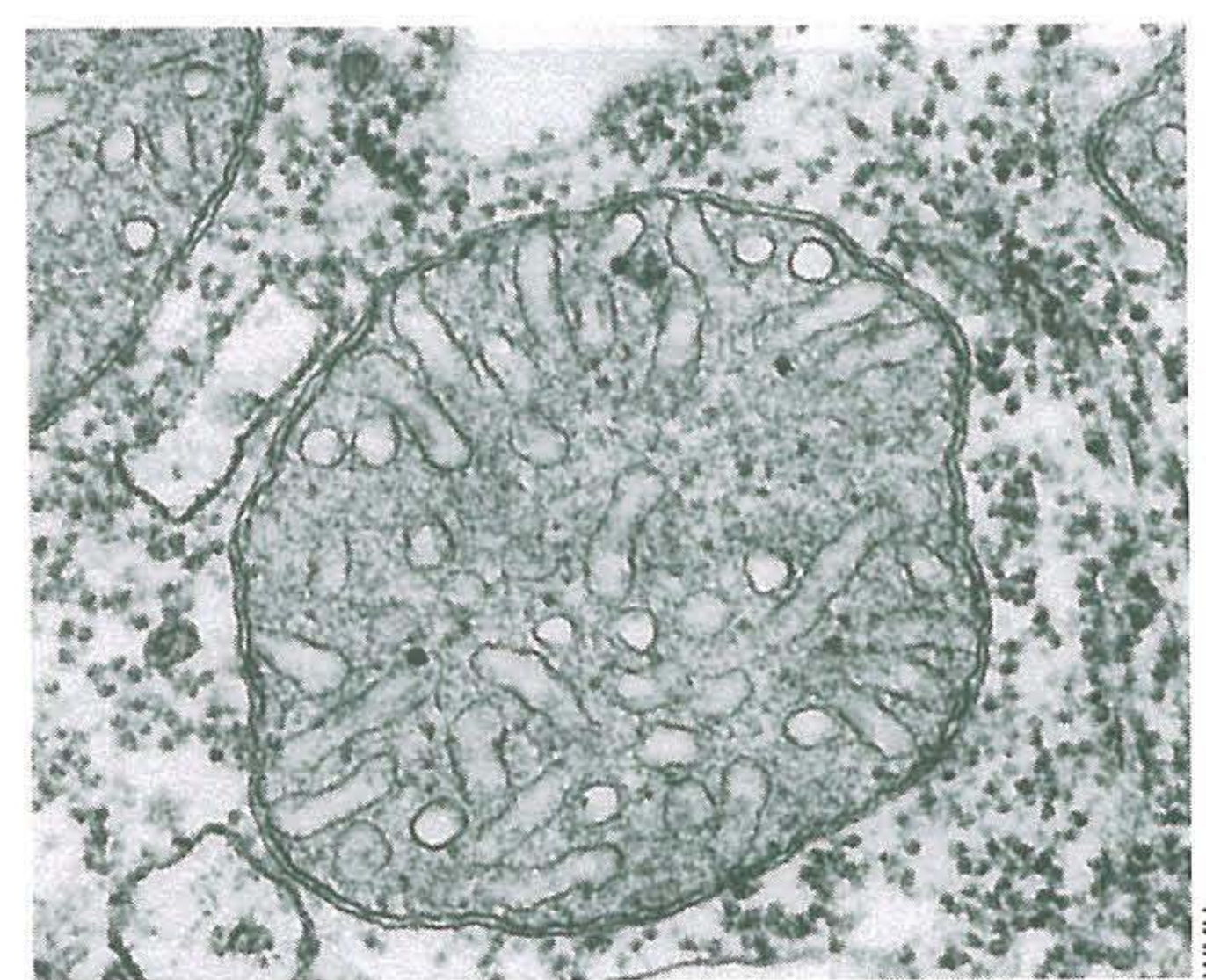
**parts of cells, not whole cells.** Some of the photographs show more than one type of organelle. The questions refer to the main organelle in the centre of the photo.



1. (a) Name this organelle (arrowed): \_\_\_\_\_
- (b) State which kind of cell(s) this organelle would be found in:  
\_\_\_\_\_
- (c) Describe the function of this organelle: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (d) Label two structures that can be seen inside this organelle.



2. (a) Name this organelle (arrowed): \_\_\_\_\_
- (b) State which kind of cell(s) this organelle would be found in:  
\_\_\_\_\_
- (c) Describe the function of this organelle: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

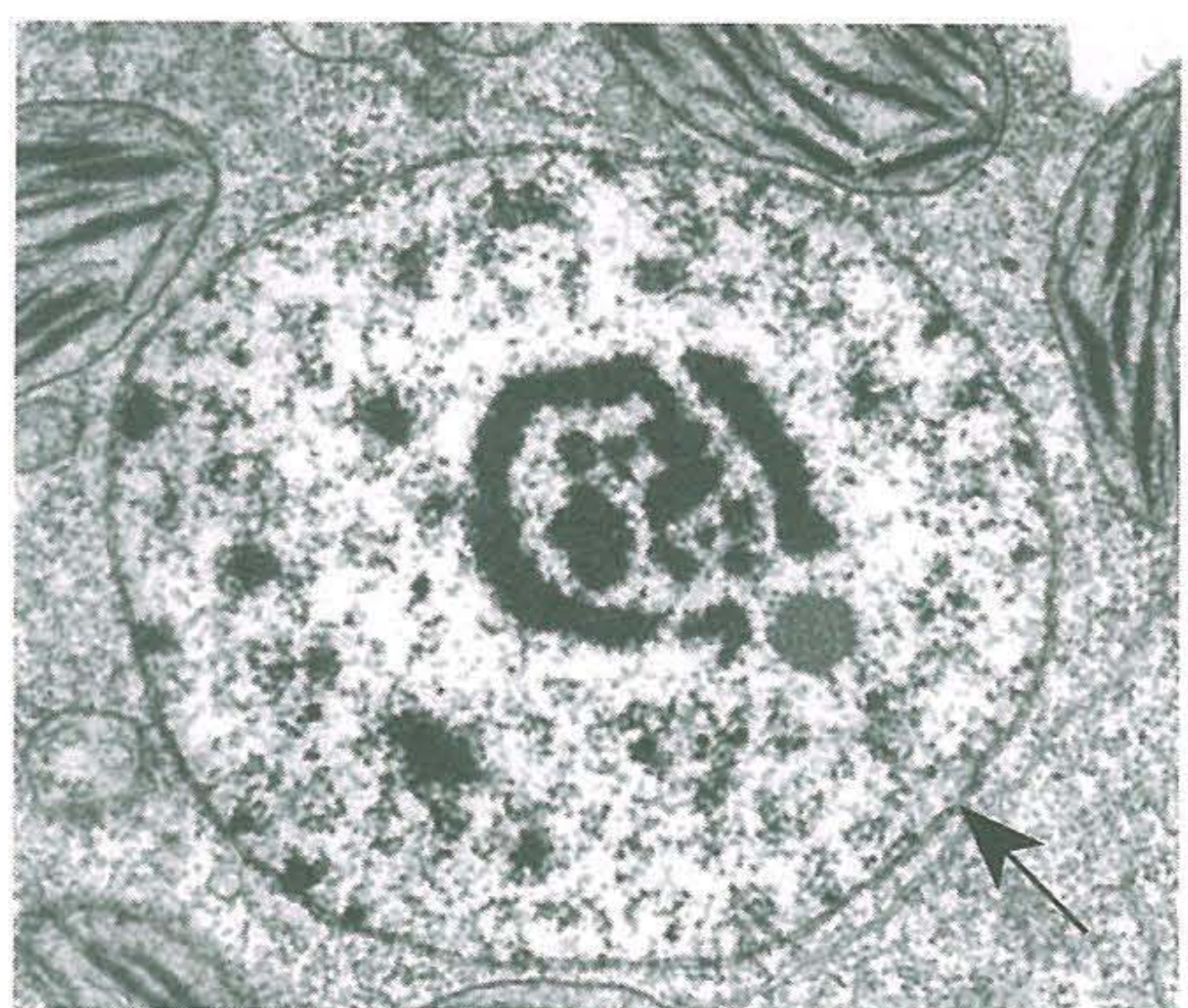


3. (a) Name the large, circular organelle: \_\_\_\_\_
- (b) State which kind of cell(s) this organelle would be found in:  
\_\_\_\_\_
- (c) Describe the function of this organelle: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (d) Label two regions that can be seen inside this organelle.

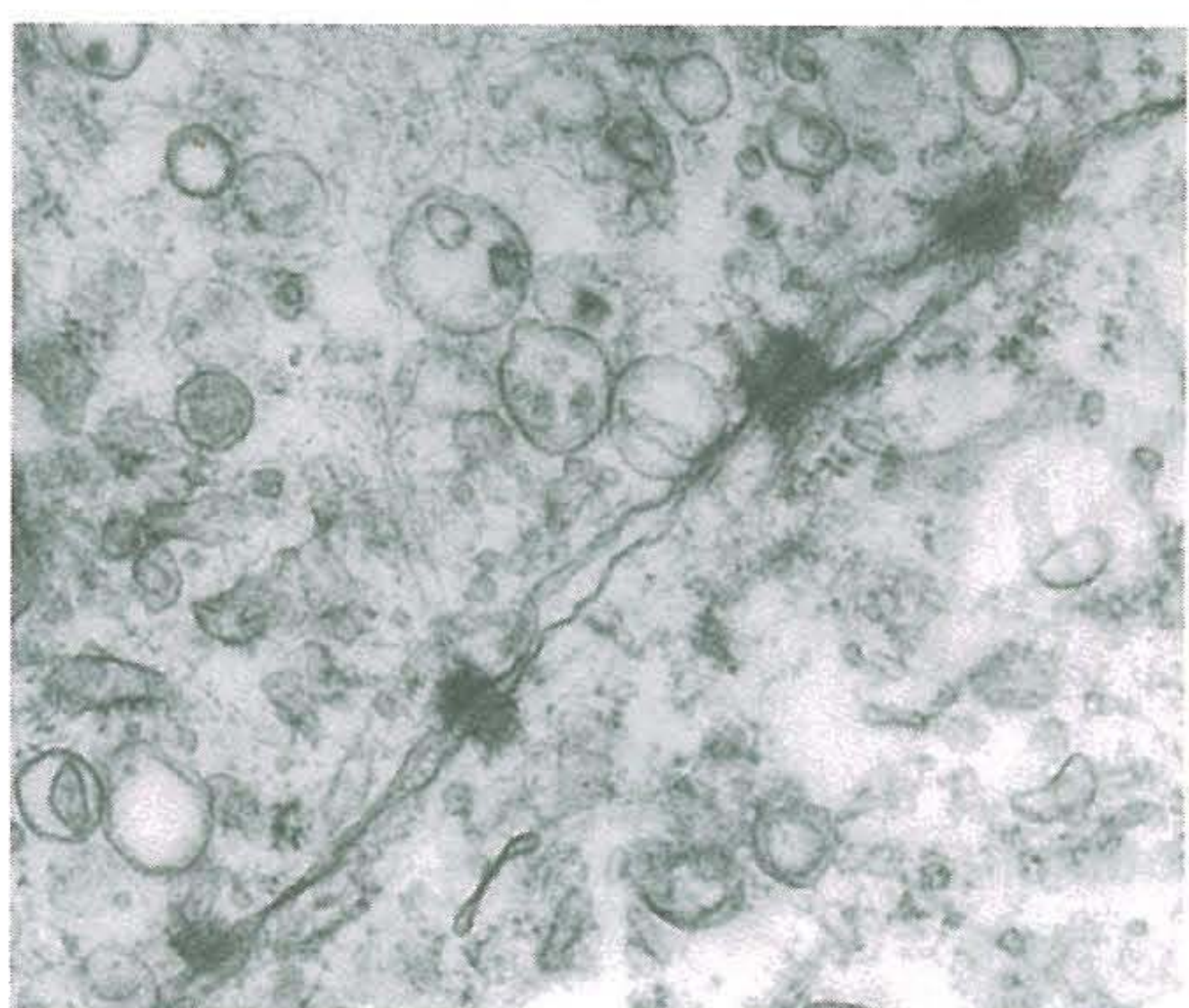


4. (a) Name and label the ribbon-like organelle in this photograph (arrowed):  
\_\_\_\_\_
- (b) State which kind of cell(s) this organelle is found in:  
\_\_\_\_\_
- (c) Describe the function of these organelles: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (d) Name the dark 'blobs' attached to the organelle you have labeled:  
\_\_\_\_\_  
\_\_\_\_\_





5. (a) Name this large circular structure (arrowed): \_\_\_\_\_
- (b) State which kind of cell(s) this structure would be found in:  
\_\_\_\_\_
- (c) Describe the function of this structure: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (d) Label three features relating to this structure in the photograph.



6. The four dark structures shown in this photograph are called **desmosomes**. They cause the plasma membranes of neighboring cells to stick together. Without desmosomes, animal cells would not combine together to form tissues.
- (a) Describe the functions of the plasma membrane:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (b) Label the plasma membrane and the four desmosomes in the photograph.

7. In the space below, draw a simple, labeled diagram of a **generalized cell** to show the relative size and location of these six structures and organelles (simple outlines of the organelles will do):

